

Brandyn A. White

PRESENT ADDRESS

Available on request

PERMANENT ADDRESS

Available on request
bwhite@cs.umd.edu

OBJECTIVE

Use my mobile and cloud computing experience to make computer vision accessible to developers.

EDUCATION

University of Maryland, College Park, MD
Pursuing a Ph.D. in Computer Science, Fall 2009-Present

University of Central Florida, Orlando, FL
Bachelors Degree in Computer Engineering, May 2009
Graduated with Honors in the Major

TECHNICAL SKILLS

Programming Languages

C/C++, Python, Cython, Obj-C, MATLAB, Java, x86 assembly, VHDL

Programming Frameworks

Hadoop, Google App Engine, Apple iPhone SDK, Xilinx ISE

Operating Systems and Environments

Linux, OS X, Atmel-AVR, Xilinx EDK

PUBLICATIONS

Tom Yeh, **Brandyn White**, Jose San Pedro, Boris Katz, and Larry Davis, "A Case for Query by Image and Text Content: Searching Computer Help using Screenshots and Keywords", World Wide Web (WWW'11). Hyderabad, India. March 2011

Jeffrey Bigham, Chandrika Jayant, Hanjie Ji, Greg Little, Andrew Miller, Robert Miller, Robin Miller, Aubrey Tatarowicz, **Brandyn White**, Samuel White, and Tom Yeh, "VizWiz: nearly real-time answers to visual questions", User Interface Software and Technology (UIST'10). New York City, NY, USA. October 2010. Best Paper Award

Brandyn White, Tom Yeh, Jimmy Lin, and Larry Davis, "Web-Scale Computer Vision using MapReduce for Multimedia Data Mining", Workshop on Multimedia Data Mining at KDD (MDMKDD'10). Washington, DC, USA. July 2010

Brandyn White and Ladislau Bölöni, "Automatic Analysis of Embodied Team Actions", Workshop on Plan, Activity, and Intent Recognition (PAIR'09). Budapest, Hungary. May 2009

Brandyn White, Nate Blaylock, and Ladislau Bölöni, "Analyzing Team Actions with Cascading HMM", Florida Artificial Intelligence Research Society Conference (FLAIRS'09). Sanibel Island, FL, USA. May 2009

Brandyn White and Mubarak Shah, "Automatically Tuning Background Subtraction Parameters Using Particle Swarm Optimization", International Conference on Multimedia & Expo (ICME'07). Beijing, China. July 2007

EXPERIENCE

- Research Assistant** UM Computer Vision Lab Fall 2009-Present
College Park, MD
Developed the Vitrievie image retrieval system using Hadoop and a dataset of 10 million images on a 450 node cluster.
- President/Developer** Dapper Vision May 2009-Present
Saint Petersburg, FL
Developed an iPhone application (Mosaica) that produces 3D panoramas with image processing performed on the device. Developed the Mosaica community site and backend using Google App Engine with 40 thousand users.
- Research Assistant** UCF NetMoc Lab June 2008-May 2009
Orlando, FL
Developed algorithm to recognize and analyze team actions using a DBN and SIR Particle Filter to perform inference; later extended to use a Cascading HMM and exact inference.
- Research Assistant** UCF Computer Vision Lab Feb. 2006-June 2008
Orlando, FL
Authored the 'White' KNIGHT automated surveillance system consisting of detection, tracking, classification, and event recognition modules using state of the art algorithms. Participated in ETISEO and CLEAR surveillance evaluations using 'White' KNIGHT surveillance system. Produced high quality implementations of Mixture of Gaussians, Non-Parametric, and Gradient based background subtraction algorithms.
- R&D Intern** Object Video Summer 2007
Reston, VA
Worked in a team environment to develop computer vision algorithms for use in existing and new products. Improved speed, accuracy, and testability of existing algorithms.
- Branch Manager** PCT Credit Union 2003-2004
Saint Petersburg, FL
Inaugural manager of student run branch. Professional management and administration of the branch and branch personnel, including courteous handling of member and staff complaints.

UCF Research Projects

- Geo-Registration - SAIC** Fall 2007
Developed method to perform geo-registration on provided data using imagery and telemetry.
- Human Classification - Perceptek (VACE Tier-2)** Spring 2007
Designed and implemented modular classification library and toolkit using an SVM with local gradient and optical flow orientation histograms as features.
- Surveillance Evaluation - CLEAR (VACE Tier-1)** Spring 2007
Designed and implemented an object tracker in Python to interface with 'White' KNIGHT to allow for easier code maintenance when dealing with evaluation specific events and challenges.

Surveillance Evaluation - ETISEO

Winter 2006

Designed and implemented a new tracking method that uses an SVM to resolve ambiguous split and merge cases produced by the object detection in crowded scenes. Designed and implemented a novel method to automatically optimize a background subtraction algorithm's parameters to overcome the manual tuning of scene specific settings. Received special recognition for being one of the top performing participants.

Railway Inspection - FDOT

Summer 2006

Designed and implemented vision based methods to identify rail defects using a custom high-rail cart.

Nighttime Surveillance - Perceptek

Summer 2006

Improved detection accuracy of the in-house surveillance system on IR and low contrast EO imagery.

Future Combat Systems - Lockheed Martin

Spring 2006

IR and EO human and vehicle detection and classification on task specific imagery. Obtained *secret* level security clearance and worked in a secure environment.